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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,731	08/18/2008	Shahram Miham	LU 6137 (US)	1680
24114 7590 04/01/2009 LyondellBasell Industries 3801 WEST CHESTER PIKE NEWTOWN SQUARE, PA 19073				
EXAMINER				
TESKIN, FRED M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
04/01/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/575,731

**Applicant(s)**

MIHAN ET AL.

**Examiner**

Fred M. Teskin

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 7 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 20060821
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**Detailed Action**

This Office action is responsive to application filed 13 April 2006, accompanied by a preliminary amendment, which has been entered. Claims 1-12 are currently pending and under examination herein.

The disclosure is objected to because of the following informalities: the absence of section headings in accordance with Rule 77(b). Appropriate correction of the specification is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-10 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 98/10542.

WO '542 has described (Example 1) a process for preparing a trimethylaluminum (TMA)-treated silica support, wherein 400 g of Davison 948 silica, having a loss-on-

ignition value of 11.14 wt-%, was added slowly to 3380 cc of a 10 wt-% TMA solution in iso-pentane contained in a 5 liter flask at -75°C. After all the silica had been added, the slurry was allowed to warm up to 22°C and was maintained at this temperature for 1 hour. The support material was then "dried to free-flowing powder" (page 10, ll. 15-16). It is noted that silica and TMA are species of applicants' "inorganic support" and "metal alkyl compound", respectively, per pending claims 1-5 and 12, and were brought into contact with a solvent within claims 5-6, followed by warming under such conditions as to provide free-flowing powder. Pending claims 1, 5 and 9 define a pulverulent solid by an angle of repose of up to 48°. While this limitation is not positively disclosed, WO '542 is seen to teach all essential steps of the process for preparing said solid as set out in pending claims 4 and 8. Further as to claims 10 and 12, Example 1 of WO '542 describes a process for polymerization of olefins in a semi-batch, gas-phase reactor at 85°C in the presence of a catalyst (silica-supported  $\text{Cp}_2\text{ZrCl}_2$ ) and the TMA-treated silica obtained from the aforementioned preparation. WO '542 does not state that a time-activity behavior of the catalyst was influenced by means of the solid (support). However, in light of the correspondence in preparative steps, a plausible basis exists to infer that the claimed properties of the pulverulent solid not disclosed by WO '542 may be inherent. Where the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness is established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). When there is sound basis for believing that the products of the

applicant and the prior art are the same, the applicant has the burden of showing that they are not. *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over SU 0409723.

SU '723 has described as adsorbent comprising a metallo organic compound, e.g., trialkylaluminum, deposited on an inert carrier. Specific disclosure is provided (see Abstract) to preparation of an adsorbent by impregnating 4-10 mm carrier particles (washed and calcined at 700-800°C) with 10% solution of triisobutylaluminum in isopentane. The amount of the active agent is said to be 50 g per kg of the carrier. Nitrogen is then passed through a column filled with this adsorbent. Given the low boiling point of iso-pentane (< 30°C), the passage of nitrogen through the column is reasonably presumed to necessarily result in "removing the solvent" from the adsorbent, as per pending claim 5. As such, SU '723 teaches to contact (by impregnating) an inert carrier which has been dried (by calcining) with a metal alkyl compound in an inert solvent having the requisite boiling point and to subject the supported compound to nitrogen gas flow, thereby to implicitly teach removing the solvent from the particulate solid. Given the similarity in preparative steps, a plausible basis exists to believe that the angle of repose recited in claims 1 and 5 but not mentioned in SU '723, may be an inherent feature of specific adsorbent described therein. Thus, as in *Best, supra*, the burden shifts to applicants to show that the undisclosed property does not inhere to the product of the prior art process.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Crawford et al is cited as pertinent to the utility of alumina-supported triethylaluminum in purifying a propylene feed to a slurry polymerization reactor (note Example 14).

Claims 7 and 11 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/

Primary Examiner, Art Unit 1796

FMTeskin/03-29-09